Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims

~~Claim~~ 1. (Currently amended) [[:]] A blood treatment device ~~having~~ comprising a blood purification element ~~(1)~~ which is divided into two chambers by a semipermeable membrane ~~(3)~~, ~~its~~ with a first chamber ~~(4)~~ being part of a dialysis fluid circuit ~~(20)~~ and ~~its~~ a second chamber ~~(2)~~ being part of an extracorporeal blood circuit ~~(10)~~,

~~having~~ a dialysis fluid inlet line ~~(22)~~ which leads from a dialysis fluid processing unit ~~(21)~~ to supply fresh dialysis fluid to at least one of the first chamber ~~(4) and/or~~ and directly into the blood circuit ~~(10)~~,

~~having~~ a dialysis fluid outlet line ~~(23)~~ for removing spent dialysis fluid from the first chamber ~~(4)~~,

~~having~~ a blood inlet line ~~(11)~~ for supplying blood to the second chamber ~~(2)~~,

~~having~~ a blood return line ~~(12)~~ for returning blood from the second chamber ~~(2)~~,

~~having~~ a control unit ~~(34)~~ for controlling the blood treatment device,

~~having~~ an analyzer unit ~~(32)~~ which is connected to the control unit ~~(34)~~, and

~~having~~ at least one sensor ~~(31)~~ which is connected to the analyzer unit ~~(32)~~ on at least one of the blood circuit ~~(10) or~~ and the dialysis fluid circuit ~~(20)~~ for detecting the concentration of a substance which is capable of penetrating through the semipermeable membrane ~~(3)~~,

~~whereby~~ the analyzer unit ~~(32) is suitable for determining~~ being configured (i) to determine on the basis of ~~the measured~~ detected values of the at least one sensor ~~(31)~~ the concentration Cbi of ~~this~~ the substance in the blood in the blood inlet line ~~(11)~~, the instantaneous transfer rate $\Delta M/\Delta t$ of ~~this~~ the substance through the membrane, ~~(3)~~ and the total quantity M of ~~this~~ the substance withdrawn through the membrane ~~(3)~~ during the treatment, ~~whereby~~ (ii) to store a first admissible value range for the blood concentration Cbi of the substance, a second admissible value range for the transfer rate $\Delta M/\Delta t$, and a third admissible value range for the total quantity M of the substance to be withdrawn ~~are stored in the analyzer unit (32)~~, and ~~whereby the analyzer unit (32) is designed so that it instructs~~ (iii) to instruct the control unit ~~(34) to the extent~~ such that the blood treatment device performs the blood treatment while maintaining all three of the admissible value ranges.

~~Claim~~ 2. (Currently amended) [[:]] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein the at least

one sensor ~~(31)~~ is provided in the dialysis fluid outlet line ~~(23)~~ for determining ~~the~~ a concentration Cdo.

~~Claim~~ 3. (Currently amended) [[:]] The blood treatment device according to Claim 2, ~~characterized in that~~ wherein a second sensor is provided in the dialysis fluid inlet line ~~(22)~~ for determining ~~the~~ a concentration Cdi of the substance and is ~~also~~ connected to the analyzer unit ~~(32)~~.

~~Claim~~ 4. (Currently amended) [[:]] The blood treatment device according to Claim 2, ~~characterized in that the~~ wherein a concentration Cdi of the substance in the dialysis fluid inlet line ~~(22)~~ is predetermined by at least one of the control unit ~~(34) and/or~~ and the analyzer unit ~~(32)~~.

~~Claim~~ 5. (Currently amended) [[:]] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein the substance is potassium.

~~Claim~~ 6. (Currently amended) [[:]] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein the second value range extends from zero up to a maximum value.

~~Claim~~ 7. (Currently amended) [[:]] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein a target

value Mend which is within the third value range is stored in the analyzer unit ~~(32)~~ for the total quantity of the substance to be withdrawn.

~~Claim~~ 8. (Currently amended) [[:]] The blood treatment device according to Claim 7, ~~characterized in that~~ wherein the analyzer unit ~~(32)~~ instructs the control unit ~~(34)~~ that the target value Mend has been reached after a planned treatment time.

~~Claim~~ 9. (Currently amended) [[:]] The blood treatment device according to Claim 7, ~~characterized in that~~ wherein the analyzer unit ~~(32)~~ instructs the control unit ~~(34)~~ that on reaching the target value Mend the blood treatment is to be continued with a concentration Cdi of the substance in the dialysis fluid inlet line ~~(22)~~ such that there is no longer any transfer of the substance ~~(3)~~ through the membrane.

~~Claim~~ 10. (Currently amended) [[:]] The blood treatment device according to Claim 1, ~~characterized in that~~ wherein the control unit ~~(34)~~ is ~~suitable~~ configured for ordering an initial measurement of the blood concentration Cbi with preset treatment parameters and the analyzer unit ~~(32)~~ is ~~suitable~~ configured for determining ~~the~~ an initial value of Cbi, and ~~taking into account this~~ based on the initial value of Cbi, the first admissible value range and the second admissible value range for the blood

treatment, proposing a value for ~~the~~ at least one of a concentration Cdi of the substance in the dialysis fluid inlet line ~~(22)~~, ~~the~~ and a dialysis fluid flow Qd ~~and/or the~~ and a blood flow Qb.

~~Claim~~ 11. (Currently amended)[[:]] The blood treatment device according to Claim 10, ~~characterized in that~~ wherein the analyzer unit ~~(32)~~ determines the concentration Cdi based on ~~the basis of~~ the value which corresponds to ~~the~~ a lower limit of the first admissible value range.

~~Claim~~ 12. (Currently amended)[[:]] The blood treatment device according to Claim 10, ~~characterized in that~~ wherein the analyzer unit ~~(32)~~ determines the concentration Cdi by ~~the~~ an upper limit of the second admissible value range.

~~Claim~~ 13. (Currently amended)[[:]] The blood treatment device according to Claim 11, ~~characterized in that selection means regarding a prioritization of~~ wherein a selection device for prioritizing the withdrawal ~~[of the substance] are~~ of the substance is provided on ~~the~~ an input ~~device (35)~~ unit by an alignment with the lower limit of the first admissible value range or the upper limit of the second admissible value range.